

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/059459 A1

(51) International Patent Classification⁷: **F25J 3/02**,
F17C 9/04

(74) Agent: **HYMERS, Ronald, Robson**; BP International
Limited, Patents & Agreements, Chertsey Road, Sun-
bury-on-Thames, Middlesex TW16 7LN (GB).

(21) International Application Number:
PCT/GB2004/004988

(22) International Filing Date:
25 November 2004 (25.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0329343.8 18 December 2003 (18.12.2003) GB

(71) Applicant (for all designated States except US): **BP EX-
PLORATION OPERATING COMPANY LIMITED**
[GB/GB]; Chertsey Road, Sunbury on Thames, Middlesex
TW16 7BP (GB).

(72) Inventors; and

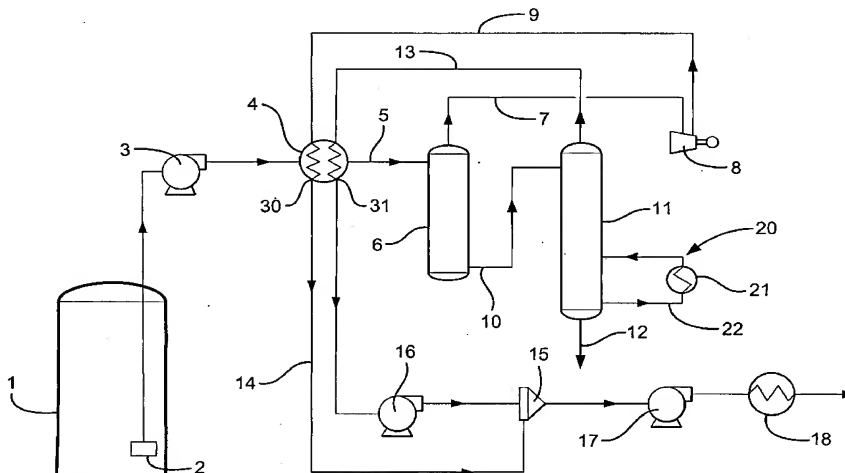
(75) Inventors/Applicants (for US only): **HARWOOD,**
David, Andrew [GB/GB]; 3 Kennel Cottages, Shendish,
Hemel Hempstead, Herts HP3 0AB (GB). **WINSTAN-**
LEY, Michael, John [GB/GB]; 86 Chestnut Lane,
Amersham, Bucks HP6 6EE (GB).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: PROCESS FOR THE CONDITIONING OF LIQUEFIED NATURAL GAS



(57) Abstract: An improved process is provided for the conditioning of liquefied natural gas. The process includes a number of steps including separating (6) an at least partially vaporized natural gas stream (5) to produce a first stream (7) which is rich in methane and a second stream (10) which is rich in hydrocarbons having two or more carbon atoms; and passing the second stream without pumping to a distillation vessel (11) to produce a natural gas liquids stream (12) and a stream rich in methane (13), the operating pressure of the distillation vessel being such that the stream rich in methane exits the distillation vessel at a pressure in the range of from 2 to 6 barg.

WO 2005/059459 A1

**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,

BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.